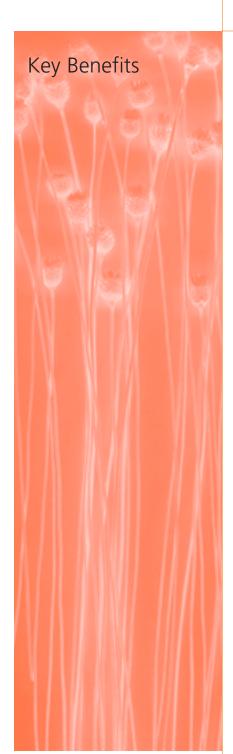# 3Com

3Com® Wireless LAN Access Points 8200/8500/8700

Key Benefits

Full Standards Support

With 3Com®, the freedom of wireless networking includes the freedom of choice. The 3Com Wireless LAN Access Points 8200, 8500, and 8700 offer a dual-mode architecture that supports both 802.11a and 802.11b wireless users on a single device. This means you can mix and match radio bands to meet different coverage and bandwidth needs within the same area. Different access point models give you the flexibility to choose to support both radio modes immediately or choose one radio mode now and upgrade to newer standards later as they become available with an easy-to-install optional Mini PCI upgrade kit.

Security

3Com offers one of the most robust suite of standards-based security on the market today. To protect sensitive data broadcast over the wireless LAN, 3Com supports Wireless Equivalent Privacy (WEP) RC4 40/ 64-bit, 128-bit and 154-bit shared-key encryption. 3Com strengthens this basic security mechanism with additional security features, including MAC address access control lists, IEEE 802.1x per-port user authentication with RADIUS server authentication support, Temporal Key Integrity Protocol (TKIP), Wireless Protected Access and Extensible Authentication Protocol (EAP) support: EAP-MD5, EAP-TLS, EAP-TTLS, and PEAP.

Performance and Reliability

3Com wireless access point performance features ensure reliable and seamless connections for users wherever they roam. Clear Channel Select automatically finds the least loaded channel for interference-free communication. Auto network connect and dynamic rate shifting keep users connected through a wide variety of conditions by changing to the optimum connection speed as they move through the network.

Manageability

3Com offers a wide range of standards-based management support, from SNMP to 3Com Network Supervisor and HP OpenView for seamless integration with your wired network. Wireless Infrastructure Device Manager and Wireless LAN Device Discovery tools let you configure parameters, run diagnostics, and monitor performance from anywhere on the network using an embedded web server browser. You can also replicate wireless device configurations from one access point to another using the save and load feature to simplify and reduce network administration.

Power over Ethernet Flexibility

With Power over Ethernet (PoE) support, the same Category 5 cable that connects your access point to the data network also provides its power. A single cable installation dramatically improves your choice of mounting configurations because you no longer need to consider AC power outlet locations. PoE support makes it easier than ever to overcome installation problems with difficult-to-wire or hard-to-reach locations.

Freedom of movement, freedom of choice

With their flexibility and unfettered access, wireless LANs are changing the way people work. Now with 3Com's enterprise-class wireless access points, you can build a cost-effective, reliable, secure wireless network that provides users with seamless connectivity to the Internet, company intranet, and the wired corporate network from anywhere they happen to be—conference room, cafeteria or office.

3Com's dual-mode design supports both 802.11a and 802.11b wireless standards on a single access point. This capability increases configuration and coverage flexibility and protects your network investment for both existing and emerging wireless standards. Industry-leading security features and comprehensive management and performance features combine to make these enterprise-class wireless access points an ideal choice for organizations ready to serve their increasingly mobile workforce.

Implementing the right standard for your wireless network needs

Understanding the characteristics of the 802.11a and 802.11b standards can help you make the best choice for your wireless implementation plans.

Far-Reaching 802.11b
802.11b operates in the 2.4 GHz band at 11 Mbps. Ratified in 1999, it's the most widely deployed protocol in the market today due to the Wi-Fi Alliance's successful certification efforts that have ensured interoperability. It supports the widest coverage—up to 100 meters (328 feet). However, 802.11b is slower than 802.11a and it is subject to a greater risk of radio interference because it operates in the more popular 2.4 GHz band.

Consider 802.11b when you need wider coverage and vendor compatibility and you are

- Implementing a complete wireless LAN solution, including bridges, gateways, access points and clients; Wi-Fi certification guarantees compatibility among vendors

- Managing a tight budget; 802.11b is extremely price competitive with a wide range of vendors and price points

- Providing access to hot spots in public spaces such as coffee shops or university cafeterias

- Running applications that don't require high bandwidth

High-Performance 802.11a
Ratified in 2002, 802.11a is IEEE's more recent wireless standard. It operates at the 5 GHz band and supports data rates at up to 54 Mbps. For those organizations demanding even higher speeds, a "turbo mode" feature can boost throughput rates up to 108 Mbps. And because there are fewer devices in the 5 GHz band, there's less potential for RF interference. However, because it is at an entirely different radio spectrum, it is not compatible with 802.11b. The higher spectrum provides about 50 meters (164 feet) of coverage—about half what 802.11b offers.

Consider 802.11a when you need high throughput in a confined space and you are

- Running high-bandwidth applications like voice, video, or multimedia over a wireless network that can benefit from a fivefold increase in data throughput

- Transferring large files like computer aided design files, preprint publishing documents or graphics files, such as MRI scans for medical applications, that demand additional bandwidth

- Supporting a dense user base confined to a small coverage area. Because 802.11a has a greater number of non-overlapping channels, you can pack more access points in a tighter space

Specifications

Security

Authentication: Supports 802.11x with Remote Access Dial-In Service (RADIUS) server-based MAC address authentication. Also supports TKIP Wireless Protected Access, Extensible Authentication Protocols (EAP) EAP-MD5, EAP-TLS, EAP-TTLS, and PEAP.

Encryption: Supports 40/64-bit, 128-bit and 154-bit Wireless Encryption Protocol (WEP) shared key encryption.

Access Control: Extended Service Set ID (ESSID) authentication, sever access control lists support.

Performance

250 simultaneous user support

Dynamic rate shifting moves between data rates as conditions and distances change.

Clear channel select chooses best available channel for conditions and distance.

802.11a turbo mode boosts performance from 54 Mbps to 108 Mbps over 802.11a connections.

Advanced DHCP support automatically assigns valid IP address from DHCP server on Ethernet network or built-in access point's DHCP server.

Network Management

3Com Network Supervisor, a powerful yet easy-to-use management application, provided free of charge on CD-ROM.

Wireless Infrastructure Device Manager and Wireless LAN Discovery Tool let you configure parameters, run diagnostics, and monitor performance from anywhere on the network.

Embedded web server works with any web browser that supports HTML and Java Script for easy configuration and management.

SNMP v1- or SNMP v3-compliant management

HP OpenView support

Standards Conformance

Wi-Fi certified

IEEE 802.11b

IEEE 802.11a

CSMA/CA

Radio Operation

Data Rates: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps; 802.11b: 1, 2, 5.5, 11 Mbps

Frequency Band: 802.11a: 5 GHz; 802.11b: 2.4 GHz

Wireless Medium: DSSS for 802.11b and OFDM for 802.11a

Operating Channels: 802.11a: 36-64 (8 non-overlapping total); 802.11b: 1-11 (U.S. and Canada), 1-13 (Worldwide)

Operating Range: 802.11a: up to 50 meters (164 feet) transmit and receive; 802.11b: up to 100 meters (328 feet) transmit and receive

Transmit Power Settings:
802.11a: 18 dBm low band, 20 dBm midband depending on the bit rate

Receive Sensitivity:
802.11a: 6 Mbps: -84 dBm, +/- 2 dBm (depending on band)

    12 Mbps: -82 dBm

    36 Mbps: -73 dBm

    54 Mbps: -66 dBm

802.11b: 1 Mbps: -88 dBm

    2 Mbps: -85 dBm

    5.5 Mbps: -84 dBm

    11 Mbps: -80 dBm

Antenna Options: 802.11b: Options are available, see "Ordering Information" for detail; 802.11a: Integrated antenna only

Safety & Electromagnetic Conformance

Safety: IEC & EN 60960, UL & CA 60950, NOM 019

EMC: FCC part 15.247, part 15.205, part 15.209, part 15.407, RSS-210, EN 300-328-2, EN 301 893, TELEC

Immunity: EN 301 489-17, EN 301 489-3

Environmental Operating Ranges

Temperature: 0º C to 40º C, (32º F to 104º F)

Humidity: 5-95% non-condensing

Altitude: 0 to 2438 meters (0 to 8,000 feet)

Physical Dimensions

Height: 32 cm (12.5 in)

Width: 20 cm (8.1 in)

Depth: 7 cm (2.8 in)

Package Contents

Access point: depending on model, the access point ships with either two radios or one radio and one open radio slot.

Inline PoE power injector/adapter with North American ungrounded plug

Category 5 Ethernet cable

Mounting bracket and hardware

User guide

Warranty

One-year hardware warranty; 90-day software warranty

Ordering Information

Choose the 3Com 11 Mbps Wireless LAN Access Point 8200 for the 802.11b radio, or the 3Com 11 Mbps Wireless LAN Access Point 8500 for the 802.11a, and add support for the second radio with an optional Mini PCI upgrade kit. The 3Com 11 Mbps Wireless LAN Access Point 8700 ships with both 802.11a and 802.11b radio support.

Access Points

Product Name	Order Number	Region
3Com Wireless LAN Access Point 8200	3CRWE820096A	U.S./Canada, Latin America, Asia-Pacific countries, Europe
3Com Wireless LAN Access Point 8500	3CRWE850075A	U.S./Canada, Latin America, Asia-Pacific countries, Europe
3Com Wireless LAN Access Point 8700	3CRWE870075A	U.S./Canada, Latin America, Asia-Pacific countries, Europe

Upgrade Kits

3Com 802.11a Wireless LAN Access Point Upgrade Kit	3CRWEAMOD75A	3Com Wireless LAN Access Point 8200 (3CRWE820096A)
3Com 802.11b Wireless LAN Access Point Upgrade Kit	3CRWEBMOD96A	3Com Wireless LAN Access Point 8500 (3CRWE850075A)

Accessories

3Com SuperStack® 3Switch 4400 PWR	3C17205-US	All 3Com Wireless LAN Access Point 8200/8500/8700 products
3Com Network Jack Multiport Power over Ethernet Midspan Solution	3CNJPSE24	
3Com 4.0 dBi Omnidirectional Antenna	3CWE490	3Com Wireless LAN Access Point 8200 (3CRWE820096A)
3Com 2.5 dBi Ceiling Mount Omnidirectional Antenna	3CWE492	3Com Wireless LAN Access Point 8700 (3CRWE870075A)
3Com 4.0 dBi Hallway Bidirectional Antenna	3CWE497	
3Com 8.0 dBi Panel Antenna Cable	3CWE498	3Com 802.11b Wireless LAN Access Point Upgrade Kit (3CRWEBMOD96A)
3Com 6-Foot Antenna Cable	3CWE480	
3Com 20-Foot Antenna Cable	3CWE481	

Use the 3Com Wireless LAN Access Points 8200/8500/8700 with these 3Com products

3Com 11 Mbps Wireless LAN Outdoor Bridge Solution	3CRWEASY96A
3Com Wireless LAN Building-to-Building Bridge	3CRWE91096A
3Com 11 Mbps Wireless LAN PC Card with XJACK® Antenna	3CRWE62092B

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